Parking Management System
Business Case
April 14, 2004 (Revised 7-9-2004)

Business Requirements:

The scope of this project is intended to provide a parking management system to replace a current system used by the North Dakota University System institutions and to provide additional functionality. The current system operates on the legacy computer system which will be discontinued as part of the ConnectND project. Additionally, the current software is outdated, will no longer be supported, and does not meet the management needs of the institutions in today's environment. The Parking Management System will interface with the ConnectND system.

The intent of this replacement system is to standardize all functions and enable management to operate more effectively and efficiently while providing timely information to administrative areas. The replacement system is expected to support hand-held readers to simplify parking management. Each institution would be secured so that each institution will see their information; however, reporting could also take place at the NDUS level.

Functional areas managed in this implementation include:

- Parking Registration – this portion of the system would have the capability to generate registration forms and correspondence for parking renewals.
- Parking Enforcement – this portion of the system would have the capability to track parking warnings issued to the individual (vs to the vehicle), contain the table listing offenses and associated fine amount, track by license plate until the registered owner can be found, interface with handheld ticket writer equipment, track manually written tickets, track frequent violators so fines can be adjusted accordingly, track impoundments, and allow for parking fine adjustments by the Parking Office.
- Collections – this portion of the system would have the capability to track cash check, credit card, debit card, and payroll deduction payments for fees/charges. This portion of the system would also allow for allow for transfer of unpaid parking fees to the institution's Accounts Receivables, increase ticket price for frequent violators after a threshold has been reached, and automatically add late fees to unpaid tickets after a specified period of time.
- Cash Management – this portion of the system would have the capability of running daily printout of postings to balance tills and include credit/debit card transactions, generate receipt numbers for all transactions in the system, and provide financial transaction reports necessary for accounting purposes at the institutional and system-wide level.
- Parking Lot Management – the intent of this portion of the system would be to keep track of lot locations and capacities for different permit types, track openings for management to assign to someone on a waiting list, and contain a central calendar of events that would keep track of incoming groups.

- Pay Parking Operations – this portion of the system would provide management tools for the pay lot operations, track visitor coupons for departmental guests, and provide management tools for the parking meter operation.

Cost/benefit Analysis:

It is the intent of the project to begin during Summer 2004 and complete implementation prior to June 30, 2005 (scheduled date for shutdown of the legacy system). Three institutions have been actively involved in the Parking Management Software Project and have indicated their desire to implement the system. These institutions are NDSCS, NDSU, and UND. It is my understanding that some of the smaller institutions may use certain parts of the Parking Management System. The Parking registration portion may be attractive for smaller institutions. State agencies would have the ability to also take advantage of this system being procured by Higher Education if interested.

This project is necessary to continue parking management operations at all NDUS institutions. Continuation of the legacy system is not an option as this system will be discontinued after implementation of the ConnectND system.

Estimated Implementation Cost with an 85% Confidence Factor

Vendor Software and Implementation	$141,050
Hardware	$117,634
Software	$22,500
Personnel	$131,703
Other	$8,000
TOTAL DIRECT COST	$420,887
In-kind Contributions (mostly if not all personnel)	$72,852
TOTAL PROJECT COST	$493,739

Estimated On-going Biennium Cost with an 85% Confidence Factor

Vendor Software and Implementation	$48,964
Hardware	$24,000
Software	$9,000
Personnel	$71,020
Other	$1,600
TOTAL DIRECT COST	$154,584
In-kind Contributions (mostly if not all personnel)	$103,726
TOTAL PROJECT COST	$258,310

The benefits of this project will be to improve efficiencies, enable new capabilities, and gain access to information in a timely manner. Having a system that interfaces with the ConnectND system will allow for these capabilities.

Funding has been secured for this project and includes monies for backfilling positions so that the best and most knowledgeable campus personnel in this field are on the project. Not only is this a benefit but also reduces the risk involved with the project.

This project is a "system-wide" solution and, optionally, allows for the State to also purchase off of this contract. It is a "centralized" IT management solution.

This project had not been included in a campus IT plan previously as the ConnectND project was the catalyst driving this system's replacement.

The University of North Dakota (UND) and North Dakota State University (NDSU) have been given approval by State Board of Higher Education action to formulate rules and regulations regarding parking and to set up systems to provide for the safe and orderly control of vehicles on campuses. These systems, over the years, have been manual and very paper oriented. This has to change as the campuses grow and the need to automate and streamline operations becomes necessary.

Risk Analysis:

The following is a listing of identified risks:

- With the discontinuation of the legacy system and without a replacement system the North Dakota University System institutions would not have a parking management system in place.
- Without a replacement system reverting to a manual "shadow" system would increase management and administrative costs.
- The risk of failure has been reduced by budgeting backfill monies so that those personnel with the most expertise can be brought onto the project for implementation.
- Risk has also been reduced by using the "train the trainer" method of training so that a larger pool of personnel can be educated on the new system and expertise is retained within the organization as specialists. From work sessions, two individuals have been identified from NDSU and UND to be lead trainers. These two individuals are Tracy Breland, NDSU and Sherry Kapella, UND.
- Three institutions have been "high-end or power" users on the current legacy system and have considerable experience in what is needed in a new product. It is my understanding that UND most likely would be the test site with NDSU and NDSCS coming on as soon as all testing is completed. It is anticipated those staff knowledgeable about the system could assist with its implementation at other NDUS institution's start ups. This knowledge will reduce the risk of a product that does not fulfill the needs of the institutions as a system.
- Risk has also been reduced by the committee that worked on the Parking Management System Project networked with college and university parking associations where they obtained much information on automation and also learned which companies were the leaders in the parking management software business.
- Both of the companies that were chosen as finalists were well recommended. T-2 Systems is by far the leader in the parking management software applications for colleges and universities. T-2 Systems has also indicated that they have installed their Parking Management software on campuses that have PeopleSoft. This further reduces the risk involved with this project.